

WHAT IS CLAIMED IS:

1 1. A method for identifying a compound that modulates angiogenesis,
2 the method comprising the steps of:

3 (i) contacting the compound with an angiogenesis polypeptide selected
4 from the group consisting of Axl, tubulin cofactor D, transglutaminase 2, cytosine
5 deaminase, peptidase M41 (paraplegin), CD13 aminopeptidase, PRK-1, zip kinase, Gas6,
6 SRm160, non-muscle myosin heavy chain, calmodulin 2, novel symporter, novel
7 semaphorin, novel zinc finger helicase (FLJ22611), plexin-A2, deoxycytidylate
8 deaminase, and a novel sugar transporter; and

9 (ii) determining the functional effect of the compound upon the
10 angiogenesis polypeptide.

1 2. The method of claim 1, wherein the functional effect is determined
2 *in vitro*.

1 3. The method of claim 2, wherein the functional effect is a physical
2 effect.

1 4. The method of claim 2, wherein the functional effect is determined
2 by measuring ligand binding to the polypeptide.

1 5. The method of claim 2, wherein the functional effect is a chemical
2 effect.

1 6. The method of claim 1, wherein the polypeptide is expressed in a
2 eukaryotic host cell.

1 7. The method of claim 6, wherein the functional effect is a physical
2 effect.

1 8. The method of claim 7, wherein the functional effect is determined
2 by measuring ligand binding to the polypeptide.

1 9. The method of claim 1, wherein the functional effect is a chemical
2 or phenotypic effect.

1 10. The method of claim 10, wherein the polypeptide is expressed in a
2 eukaryotic host cell.

1 11. The method of claim 10, wherein the host cell is an endothelial
2 cell.

1 12. The method of claim 11, wherein the functional effect is
2 determined by measuring $\alpha v\beta 3$ expression or haptotaxis.

1 13. The method of claim 1, wherein modulation is inhibition of
2 angiogenesis.

1 14. The method of claim 1, wherein the polypeptide is recombinant.

1 15. The method of claim 1, wherein the compound is an antibody.

1 16. The method of claim 1, wherein the compound is an antisense
2 molecule.

1 17. The method of claim 1, wherein the compound is an RNAi
2 molecule.

1 18. The method of claim 1, wherein the compound is a small organic
2 molecule.

1 19. A method for identifying a compound that modulates angiogenesis,
2 the method comprising the steps of:

3 (i) contacting the compound with an angiogenesis polypeptide selected
4 from the group consisting of Axl, tubulin cofactor D, transglutaminase 2, cytosine
5 deaminase, peptidase M41 (paraplegin), CD13 aminopeptidase, PRK-1, zip kinase, Gas6,
6 SRm160, non-muscle myosin heavy chain, calmodulin 2, novel symporter, novel
7 semaphorin, novel zinc finger helicase (FLJ22611), plexin-A2, deoxycytidylate
8 deaminase, and a novel sugar transporter;

9 (ii) determining the physical effect of the compound upon the target
10 polypeptide or fragment thereof or inactive variant thereof; and

(iii) determining the chemical or phenotypic effect of the compound upon
a cell comprising the target polypeptide or fragment thereof or inactive variant thereof,
thereby identifying a compound that modulates cell cycle arrest.

1 20. A method of modulating angiogenesis in a subject, the method
2 comprising the step of administering to the subject a therapeutically effective amount of a
3 compound identified using the method of claim 1.

1 21. The method of claim 20, wherein the subject is a human.

1 22. The method of claim 20, wherein the compound is an antibody.

1 23. The method of claim 20, wherein the compound is an antisense
2 molecule.

1 24. The method of claim 20, wherein the compound is an RNAi
2 molecule.

1 25. The method of claim 20, wherein the compound is a small organic
2 molecule.

26. The method of claim 20, wherein the compound inhibits angiogenesis.

1 27. A method for identifying a compound that modulates
2 tumorigenesis, the method comprising the steps of:

(i) contacting the compound with an Axl polypeptide; and
(ii) determining the functional effect of the compound upon the Axl polypeptide.

1 28. The method of claim 27, wherein the functional effect is
2 determined *in vitro*.

1 29. The method of claim 28, wherein the functional effect is a physical
2 effect.

30. The method of claim 28, wherein the functional effect is
determined by measuring ligand binding to the polypeptide.

1 31. The method of claim 28, wherein the functional effect is a chemical
2 effect.

1 32. The method of claim 27, wherein the polypeptide is expressed in a
2 eukaryotic host cell.

1 33. The method of claim 27, wherein the functional effect is a physical
2 effect.

1 34. The method of claim 33, wherein the functional effect is
2 determined by measuring ligand binding to the polypeptide.

1 35. The method of claim 27, wherein the functional effect is a chemical
2 or phenotypic effect.

1 36. The method of claim 35, wherein the polypeptide is expressed in a
2 eukaryotic host cell.

1 37. The method of claim 35, wherein the host cell is a cancer cell.

1 38. The method of claim 37, wherein the functional effect is
2 determined by measuring tumor growth *in vivo*.

1 39. The method of claim 27, wherein modulation is inhibition of
2 tumorigenesis.

1 40. The method of claim 27, wherein the polypeptide is recombinant.

1 41. The method of claim 27, wherein the compound is an antibody.

1 42. The method of claim 27, wherein the compound is an antisense
2 molecule.

1 43. The method of claim 27, wherein the compound is an RNAi
2 molecule.

1 44. The method of claim 27, wherein the compound is a small organic
2 molecule.

1 45 . A method for identifying a compound that modulates
2 tumorigenesis, the method comprising the steps of:
3 (i) contacting the compound with an Axl polypeptide,
4 (ii) determining the physical effect of the compound upon the Axl
5 polypeptide or fragment thereof or inactive variant thereof; and
6 (iii) determining the chemical or phenotypic effect of the compound upon
7 a cell comprising the Axl polypeptide or fragment thereof or inactive variant thereof,
8 thereby identifying a compound that modulates tumorigenesis.

1 46. A method of modulating tumorigenesis in a subject, the method
2 comprising the step of administering to the subject a therapeutically effective amount of a
3 compound identified using the method of claim 27.

1 47. The method of claim 46, wherein the subject is a human.

1 48. The method of claim 46, wherein the compound is an antibody.

1 49. The method of claim 46, wherein the compound is an antisense
2 molecule.

1 50. The method of claim 46, wherein the compound is an RNAi
2 molecule.

1 51. The method of claim 46, wherein the compound is a small organic
2 molecule.

1 52. The method of claim 46, wherein the compound inhibits
2 tumorigenesis.